COMPARISON OF SEX EDUCATION KNOWLEDGE AMONG SCHOOL GOING CHILDREN OF SELECTED SOUTH ASIAN COUNTRIES

SHORT SYNOPSIS

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I hereby declare that the short synopsis **"COMPARISON OF SEX EDUCATION KNOWLEDGE AMONG SCHOOL-GOING CHILDREN OF SELECTED SOUTH ASIAN COUNTRIES"** is being submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Physical Education under the Department of Sports Psychology of Lakshmibai National Institute of Physical Education, Gwalior, during the academic year 2023–2024.

It is a bona fide record of original work carried out under the supervision of Dr. Nibu R Krishna and has not been submitted, in full or in part, to any other university or institute for a degree or diploma.

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ABSTRACT

Introduction-Sex education in South Asia remains underdeveloped due to cultural taboos, fragmented policies, and inconsistent curricular implementation. In societies where discussions on sex and reproductive health are considered inappropriate, adolescents often lack proper guidance and reliable information.

Rationale-Having grown up in such a setting, the researcher has observed the confusion, myths, and discomfort adolescents experience regarding their bodies, relationships, and reproductive rights. This points to a critical gap between natural curiosity and limited access to accurate, age-appropriate knowledge.

Objective-This study examines whether adolescents today are genuinely informed or if the perceived openness is superficial. It evaluates the extent and accuracy of knowledge among school-going students, recognizing early adolescence as a key phase in shaping lifelong attitudes.

Theoretical Framework-Grounded in cognitive psychology, the study focuses on knowledge acquisition as a foundation for informed decision-making and safe behavior.

Hypothesis-On the basis of reviewed literature, expert input, and researcher insight, it is hypothesized that:

"There is no significant difference in sex education knowledge scores among students from India, Nepal, Bhutan and Bangladesh."

Methodology-The study will involve 240 students aged 11–16 from India, Nepal, Bhutan and Bangladesh. Efforts will be made to ensure gender and urban–rural representation. A culturally adapted, expert-validated questionnaire based on WHO tools will be used. Data will be analyzed using ANOVA, with post-hoc tests applied if significant differences emerge.

Expected Outcome-The study will reveal students' level of awareness and highlight contextual disparities. Findings will support the development of culturally responsive educational strategies and policy recommendations to improve sex education across South Asia.

Keywords: Sex education, Adolescents, Knowledge, South Asia, Schools, Comparative study.

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1. INTRODUCTION

Sex education plays a crucial role in the development of adolescents, equipping them with the knowledge and skills necessary to navigate their sexual and reproductive health. However, in South Asia, significant gaps remain in the implementation of comprehensive sex education. Cultural taboos, inconsistent curricula, and inadequate teacher training contribute to the widespread misinformation and confusion surrounding sexual health topics. Despite growing recognition of the importance of sex education, young people in this region remain vulnerable to the negative consequences of inadequate knowledge, such as unintended pregnancies, sexually transmitted infections (STIs), and sexual violence. This study is motivated by the need to understand the current state of knowledge among school-going children in South Asia, particularly in the context of modern educational advancements. It aims to determine whether the knowledge of adolescents has improved or remains the same compared to previous generations, and to identify regional disparities across four South Asian countries India, Nepal, Bhutan and Bangladesh.

Adolescence is a critical stage of development, during which young people form the foundation for sexual identity, decision-making, and overall health. Despite the importance of comprehensive sex education, many South Asian countries face significant challenges in delivering such education. Existing curricula often omit essential topics such as consent, gender identity, and digital safety, leaving adolescents without the necessary tools to make informed decisions about their sexual and reproductive health. Studies indicate that the implementation of sex education in South Asia is inconsistent, with urban areas often faring better than rural regions, which are hindered by a lack of resources and cultural resistance. The goal of this study is to assess the knowledge levels of school-going children in urban and rural areas of these countries, focusing on the cognitive processes that underlie their understanding of sex education content.

The rationale behind this study lies in the pressing need to address the existing gaps in sex education across South Asia. While global organizations like the World Health Organization (WHO) and UNESCO advocate for comprehensive, evidence-based sex education programs, the reality in South Asia remains far from ideal. Many students still lack a comprehensive understanding of essential topics, which has serious implications for their health and well-being. The findings from this study will shed light on whether contemporary generations of adolescents are receiving better or worse education compared to their predecessors. This is critical in assessing whether the modern, more informed generation is truly benefiting from advancements in education, or whether significant gaps in knowledge

remain. Knowledge of sex education is essential for adolescents for a variety of reasons. From a developmental perspective, accurate information helps adolescents navigate the challenges of puberty and sexual identity formation (WHO, 2020). It also plays a crucial role in health promotion, preventing risky behaviors such as unsafe sexual practices and unintended pregnancies (UNESCO, 2018). Furthermore, comprehensive sex education empowers students to make informed decisions, assert their boundaries, and advocate for their own health (UNESCO, 2018). Socially and emotionally, it fosters respect for consent, healthy relationships, and overall well-being (Goldman, 2014). This is particularly important in a region like South Asia, where sexual health is often stigmatized, and conversations around it are limited (Eisenberg et al., 2008).

This study specifically aims to assess the current levels of knowledge about sex education among adolescents in South Asia, with a focus on how this knowledge is retained and applied. Cognitive psychology suggests that knowledge is not only a mental representation that helps individuals make sense of their world, but also a tool that informs decision-making and behavior (Eysenck & Keane, 2015). By understanding the cognitive processes involved in acquiring and retaining sex education, this study will offer insights into how adolescents in South Asia learn and comprehend key sexual health concepts. The focus will be on measuring the knowledge of students, examining the cognitive differences between urban and rural contexts, and exploring the factors that contribute to these disparities.

A key aspect of this research is its comparative approach, which will examine the sex education knowledge of adolescents across four South Asian countries: India, Nepal, Bhutan and Bangladesh. These countries have different cultural, religious, and political landscapes, which contribute to the diverse ways in which sex education is implemented. In India, for instance, there is significant variation in the implementation of sex education programs across states, with urban areas generally having better access to comprehensive curricula (Kumar et al., 2017). In Bangladesh, a study by Rahman et al. (2009) found that only 54.8% of adolescents had heard of AIDS, highlighting the significant gaps in knowledge. In some areas, access to and the quality of sex education programs vary significantly, with urban regions typically having better access to structured curricula compared to rural areas, where resources and teacher training are often limited.Urban regions generally tend to have better access to structured curricula compared to rural areas, where resources and training are often limited. Furthermore, societal and cultural norms surrounding sexuality and reproductive health can restrict the scope of sex education, affecting students' exposure to essential topics such as consent, reproductive rights, and sexual health. This study will assess the extent to which such disparities impact adolescents'

knowledge and how these regional variations influence their ability to make informed decisions regarding sexual and reproductive health.

Understanding the knowledge levels and cognitive processes involved in acquiring sex education will provide valuable insights into how current educational programs can be improved. It will also contribute to the development of culturally responsive, evidence-based strategies for enhancing sex education curricula in South Asia. The findings will be relevant for policymakers and educators seeking to implement more effective sex education programs that align with global best practices while addressing the unique cultural and social contexts of each country.

By comparing the sex education knowledge of adolescents across different South Asian countries, this research will highlight the gaps in existing programs and the factors that contribute to these disparities. It will offer recommendations for improving sex education curricula and teaching methods, ensuring that they are better suited to the needs of students in different regions. Ultimately, this study aims to contribute to the ongoing efforts to provide adolescents with the knowledge and skills they need to make informed decisions about their sexual and reproductive health, thereby fostering healthier, more empowered future generations.

2. LITERATURE REVIEW

This section examines the existing body of research on Sex Education and related topics among adolescents in South Asia, focusing on its implementation, effectiveness, and variations across different countries. It examines research findings, expert opinions, and educational frameworks to understand how Sex Education is delivered in various contexts and its impact on students' knowledge and attitudes. By reviewing this literature, the aim is to contextualize the current research focus, validate the need for further investigation, and ensure that this study addresses relevant and under-explored areas in the field.

Kaur et al. (2023) carried out a scoping review to gather existing literature concerning women's awareness, knowledge, and perceptions of STIs/STDs in Asia. The goal of the study was to pinpoint areas where knowledge is lacking and where additional research is required. The authors discovered a considerable deficiency in awareness and understanding of STIs/STDs among Asian women and suggested focused educational initiatives to bridge these knowledge gaps.

Sarder et al. (2021) carried out an extensive analytical study to examine the prevalence and underlying determinants of unintended pregnancies among women of reproductive age across six South Asian nations. The study analyzed data from various national health surveys to examine socio-

economic, demographic, and health-related factors linked to unintended pregnancies. The results revealed high rates of unintended pregnancies, significantly associated with factors like lower educational levels, younger age, and insufficient contraceptive use. The authors proposed targeted interventions to enhance family planning services and education to lower the incidence of unintended pregnancies in the region.

Kumar et al. (2017) undertook a study to systematically examine the level of knowledge, prevailing attitudes, and perspectives regarding sex education among adolescent students enrolled in schools within the Ambala District of Haryana, India. This cross-sectional study involved 743 adolescents aged between 13 and 19 years, using a self-designed semi-structured questionnaire to collect data on reproductive and sexual health knowledge. In their analysis, the researchers documented that the mean age of the participants was 15.96 years The findings showed that a significant majority (93.5%) of adolescents supported the inclusion of sex education in the school curriculum. Furthermore, 86.3% believed that sex education could aid in preventing AIDS, and 91.5% felt that doctors should be responsible for delivering sex education, followed by teachers (83%) and parents (37.3%). The study concluded that substantial gaps in reproductive and sexual health knowledge exist among adolescents, highlighting the necessity for comprehensive sex education in schools.

Acharya et al. (2010) sought to determine risk factors linked to teenage pregnancy in South Asian nations through a systematic review. The study systematically searched MEDLINE, EMBASE, and CINAHL databases for relevant literature from 1996 until April 2007, comprising English-language articles discussing teenage pregnancy in South Asia. The review revealed that socio-economic factors, low educational levels, and cultural as well as family structures were consistently recognized as risk factors. Additionally, it was reported that the use of health services among teenagers was low. The authors concluded that socio-economic and cultural influences play crucial roles in teenage pregnancy in South Asia, call for further research employing standardized measures and methodologies.

Acharya et al. (2009) explored the opportunities and obstacles to implementing school-based sex and sexual health education in Nepal in their study published in the Kathmandu University Medical Journal. The research utilized both qualitative and quantitative methods to assess current knowledge and attitudes towards sexual health education among students and educators. The findings underscored that while students and teachers displayed a positive attitude towards sex education, several challenges such as cultural taboos, lack of trained educators, and limited educational resources obstruct effective implementation. The study concluded with suggestions for policy alterations and the creation of comprehensive sex education programs that are culturally sensitive and context-specific.

Rahman et al. (2009) aimed to assess the level of knowledge and awareness regarding AIDS/HIV and the influencing factors among adolescents in Bangladesh through a cross-sectional study with multistage cluster sampling. Analyzing data from 3,362 female adolescents, the study found that although 54.8% had heard of AIDS, many lacked detailed understanding regarding its transmission and prevention. The study concluded that media campaigns are vital for educating adolescents about STDs, including HIV/AIDS.

McManus and Dhar (2008) performed a cross-sectional survey aimed at understanding the knowledge, perceptions, and attitudes of adolescent girls in South Delhi regarding STIs, HIV, safer sex practices, and sex education. The findings indicated that many of the participants lacked sufficient knowledge about STIs and HIV. A large majority of the respondents expressed support for the implementation of comprehensive sex education in schools. The authors concluded that there is an urgent need for targeted educational initiatives to enhance adolescents' comprehension of sexual health and safe practices.

Gupta et al. (2004) conducted a Task-Force Study to evaluate the reproductive health awareness among rural, unmarried adolescents using structured questionnaires. The study identified considerable gaps in knowledge concerning reproductive processes, contraception, and STIs, underscoring the critical need for better educational programs to address these shortcomings and improve health outcomes.

In reviewing the existing literature on sex education and sexual health knowledge among adolescents in South Asia, it is evident that while numerous studies have highlighted critical gaps in adolescents' understanding of sexual and reproductive health, there remains a lack of comprehensive knowledge assessment. Many studies, such as those by Kaur et al. (2023) and McManus and Dhar (2008), examine adolescents' attitudes, perceptions, and the effectiveness of sex education programs, but they often do not provide an in-depth assessment of actual knowledge regarding key topics like reproductive health, contraceptives, and sexually transmitted infections (STIs). Moreover, while studies like Rahman et al. (2009) and Sarder et al. (2021) identify knowledge gaps in sexual and reproductive health, they do not focus on comparing these gaps across different countries or regions to understand the broader contextual variations in adolescents' knowledge. This is a critical shortcoming, as knowledge levels can differ significantly due to cultural, socio-economic, and regional factors. In contrast, the present research aims to assess adolescents' knowledge across four South Asian countries: India, Nepal, Bhutan and Bangladesh, through a cross-sectional study. By directly comparing the knowledge levels of adolescents

in these nations, this study will provide a clearer understanding of how geographical, cultural, and educational factors influence adolescents' knowledge of comprehensive sexuality education (CSE). Additionally, the study will highlight areas where knowledge deficits limit adolescents' ability to make informed decisions regarding sexual and reproductive health, ultimately contributing to the development of more targeted and effective interventions in these varied contexts.

3. DESCRIPTION OF BROAD AREA

The present study is situated within the broad aspect of health education, a crucial subtopic in physical education. Health education is integral in fostering adolescents' understanding of sexual and reproductive health, which is essential for their overall development. As adolescents undergo rapid physical, emotional, and cognitive growth, it is critical to equip them with accurate knowledge about sexual health, including topics such as puberty, reproductive health, consent, STIs, HIV/AIDS, and contraception. This knowledge empowers adolescents to make informed decisions and develop healthy behaviors.

In the context of cognitive psychology, adolescents are at a stage where their cognitive processes, such as information processing and retention, are still maturing. These processes are influenced by various factors like individual learning styles, previous experiences, and environmental influences. The study aims to assess whether there are differences in the levels of sex education knowledge among school-going children in India, Nepal, Bhutan and Bangladesh. Specifically, the study will test whether the levels of sex education knowledge differ across these four countries, considering the cultural and educational similarities and differences that may influence adolescents' learning.

The study employs a cross-sectional, comparative approach to test the hypothesis of no significant difference in sex education knowledge among the four countries. This "no difference" hypothesis is grounded in the premise that the cultural and educational environments in these South Asian countries share common values and social norms, which might result in similar levels of knowledge among adolescents. By testing this hypothesis, the study aims to explore whether any noticeable discrepancies exist or if these countries have achieved comparable outcomes in their sex education efforts.

The comparison of knowledge levels across these countries will help to determine if, despite potential regional differences, the adolescents in these countries possess similar foundational knowledge of sexual health. This research will contribute to the broader understanding of how educational frameworks and

societal factors influence adolescents' sex education knowledge and whether such knowledge can be standardized across South Asia.

4. OBJECTIVES OF THE STUDY

PROBLEM STATEMENT

Adolescence is a critical stage for acquiring accurate knowledge related to sex education, yet limited understanding in this area often leads to risky behaviors and negative health outcomes. While South Asian countries share many socio-cultural, religious, and educational similarities, disparities in adolescent knowledge may still exist due to variations in exposure, awareness, and delivery mechanisms. Most existing studies focus on individual countries, lacking a broader regional comparison. Without a unified assessment, it is difficult to determine whether knowledge gaps are isolated or widespread across the region. Thus, assessing sex education knowledge among school-going adolescents in India, Nepal, Bhutan and Bangladesh is essential to establish a regional understanding of the current knowledge landscape. This comparison will help identify whether knowledge levels are uniformly low, differ significantly, or show no major difference, thereby contributing to more targeted and evidence-based educational approaches across South Asia.

RESEARCH OBJECTIVES

- Assess the level of sex education knowledge among school children in selected South Asian countries.
- Compare differences in sex education knowledge across these countries and identify reasons for these variations.
- Examine the impact of limited sex education topics on students' understanding and daily lives.
- Identify barriers to effective sex education and identify reasons.
- Evaluate the benefits of integrating sex education with physical education on students' health and knowledge.
- Identify cultural, educational, and policy factors affecting sex education in selected South Asian countries.
- Recommend strategies to implement sex education to improve student outcomes.

5. RESEARCH METHODOLOGY

5.1 Research Design

This study employs a cross-sectional, comparative research design to assess the differences in sex education knowledge among school-going adolescents across four South Asian countries: India, Nepal, Bhutan and Bangladesh. A cross-sectional design is chosen because it will allow for the collection of data at a single point in time from participants in each of the four countries, facilitating a comparison of their knowledge on key topics in sex education. The comparative aspect of the design will enable the evaluation of any significant differences in sex education knowledge across the countries, accounting for regional and cultural variability. The study aims to test the hypothesis of no significant differences between countries regarding sex education knowledge This design is appropriate for understanding how adolescents' knowledge varies by country and provides valuable insights into potential gaps or strengths in sex education delivery across the selected regions.

5.2 Population and Sampling

- Target Population: Adolescents aged 11–16 years enrolled in schools across India, Nepal, Bhutan and Bangladesh.
- Sampling Strategy: Stratified random sampling will be used, with strata defined by country. An *attempt will be made* to include equal representation of genders and urban/rural schools; though final ratios may vary due to logistical constraints.
- Sample Size: Approximately N participants per country (total $4N$), ensuring adequate power for cross-country comparisons.

5.3 Data Collection

- Instrumentation: A structured knowledge assessment tool will be administered, focusing on core topics in sex education. The tool's design prioritizes cultural relevance and age-appropriate language.
- Procedure: Surveys will be conducted in school settings under supervised conditions to ensure integrity. Participation will be anonymous and voluntary.
- Ethical Safeguards: Written consent from schools/parents; verbal assent from participants. No identifiable data will be collected.

5.4 Variables

- Independent Variable: *Country* (four categories India, Nepal, Bhutan and Bangladesh).
- Dependent Variable: *Sex education knowledge score*, derived from the assessment tool.

5.5 Data Analysis

- Primary Analysis: One-way ANOVA ($\alpha = 0.05$) to compare mean knowledge scores across countries.
- Post-hoc Tests: If ANOVA results are significant, Tukey's HSD will identify specific country pairs with differing means.
- Descriptive Statistics: Mean ± SD for each country; frequency distributions for demographic variables (gender, location).

5.6 Validity and Reliability

- Content Validity: The tool will be reviewed by experts to ensure alignment with study objectives.
- Pilot Testing: A small-scale trial will assess clarity and cultural appropriateness.
- Reliability: Internal consistency (Cronbach's alpha) will be reported for the final tool.

5.7 Ethical Considerations

Approval from LNIPE, Gwalior will be obtained. Participants may withdraw freely; data will be anonymized and stored securely.

5.8 Limitations

- Representation: Equal gender/urban-rural ratios are *attempted* but not guaranteed.
- Self-Report Bias: Responses may reflect perceived expectations rather than actual knowledge.
- Contextual Factors: Variations in school curricula and cultural norms may influence results beyond the study's scope.

6. EXPECTED OUTCOME

The study is expected to assess and compare the current levels of sex education knowledge among school-going adolescents in India, Nepal, Bhutan and Bangladesh. By adopting a cross-sectional and comparative research design, this study aims to capture a snapshot of adolescent knowledge across these South Asian countries, identifying whether it has improved, declined, or remained unchanged in

relation to existing literature. The hypothesis of *no significant difference* among the countries has been deliberately chosen based on the shared sociocultural, educational, and religious values that often shape adolescent learning environments in the region. A review of prior studies indicates that while implementation practices may vary, the foundational attitudes and institutional challenges surrounding sex education remain largely consistent across these nations. Testing the null hypothesis is important, as it allows for the validation or rejection of the assumption that adolescents across South Asia experience similar knowledge gaps. The findings are expected to either confirm the need for a collective, regional approach to sex education policy reform or highlight specific country-level divergences that require targeted intervention.

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